RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/911, 703DSource: $3F\omega/b$ Date Processed by STIC: 98/2005

ENTERED



IFW16

RAW SEQUENCE LISTING DATE: 08/18/2005 PATENT APPLICATION: US/09/911,703D TIME: 10:38:59

Input Set : D:\09-911703 SL7.txt

3 <110 > APPLICANT: Biogen Idec Inc.

Output Set: N:\CRF4\08182005\I911703D.raw

```
4
         Anderson, Darrell R.
 5
         Rastetter, William H.
 6
         Hanna, Nabil
 7
         Leonard, John E.
 8
         Newman, Roland
 9
         Reff, Mitchell
11 <120> TITLE OF INVENTION: ANTI-CD20 ANTIBODIES
13 <130> FILE REFERENCE: 27693-01008
15 <140> CURRENT APPLICATION NUMBER: 09/911,703D
16 <141> CURRENT FILING DATE: 2001-07-25
18 <150> PRIOR APPLICATION NUMBER: US 08/475,813
19 <151> PRIOR FILING DATE: 1995-06-07
21 <150> PRIOR APPLICATION NUMBER: US 08/149,099
22 <151> PRIOR FILING DATE: 1993-11-03
24 <150> PRIOR APPLICATION NUMBER: US 07/978,891
25 <151> PRIOR FILING DATE: 1992-11-13
27 <160> NUMBER OF SEQ ID NOS: 11
29 <210> SEQ ID NO: 1
30 <211> LENGTH: 8540
31 <212> TYPE: DNA
32 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
35/<223> OTHER INFORMATION: vector
37 <400> SEQUENCE: 1
38 gacgtcgcgg ccgctctagg cctccaaaaa agcctcctca ctacttctgg aatagctcag
                                                                           60
39 aggccgaggc ggcctcggcc tctgcataaa taaaaaaaat tagtcagcca tgcatggggc
                                                                          120
40 ggagaatggg cggaactggg cggagttagg ggcgggatgg gcggagttag gggcgggact
                                                                          180
41 atggttgctg actaattgag atgcatgctt tgcatacttc tgcctgctgg ggagcctggg
                                                                          240
42 gactttecac acctggttgc tgactaattg agatgcatgc tttgcatact tetgeetget
                                                                          300
43 ggggagcctg gggactttcc acaccctaac tgacacacat tccacagaat taattcccct
                                                                          360
44 agttattaat agtaatcaat tacggggtca ttagttcata gcccatatat ggagttccgc
                                                                          420
45 gttacataac ttacggtaaa tggcccgcct ggctgaccgc ccaacgaccc ccgcccattg
                                                                          480
46 acgtcaataa tgacgtatgt tcccatagta acgccaatag ggactttcca ttgacgtcaa
                                                                         540
47 tgggtggact atttacggta aactgcccac ttggcagtac atcaagtgta tcatatgcca
                                                                         600
48 agtacgcccc ctattgacgt caatgacggt aaatggcccq cctqqcatta tqcccaqtac
                                                                          660
49 atgacettat gggaetttee taettggeag taeatetaeg tattagteat egetattaee
                                                                          720
50 atggtgatgc ggttttggca gtacatcaat gggcgtggat agcggtttga ctcacgggga
                                                                         780
51 tttccaagtc tccaccccat tgacgtcaat gggagtttgt tttggcacca aaatcaacgg
                                                                         840
52 gactttccaa aatgtcgtaa caactccgcc ccattgacgc aaatgggcgg taggcgtgta
                                                                         900
53 cggtgggagg tctatataag cagagctggg tacgtgaacc gtcagatcgc ctggagacgc
                                                                         960
54 catcacagat ctctcaccat gagggtcccc gctcagctcc tggggctcct gctgctctgg
                                                                        1020
55 ctcccaggtg cacgatgtga tggtaccaag gtggaaatca aacgtacggt ggctgcacca
                                                                        1080
```

Input Set : D:\09-911703 SL7.txt

Output Set: N:\CRF4\08182005\1911703D.raw

56	tctgtcttca	tcttcccgcc	atctgatgag	cagttgaaat	ctggaactgc	ctctgttgtg	1140
57	tgcctgctga	ataacttcta	tcccagagag	gccaaagtac	agtggaaggt	ggataacgcc	1200
58	ctccaatcgg	gtaactccca	ggagagtgtc	acagagcagg	acagcaagga	cagcacctac	1260
		gcaccctgac					1320
60	tgcgaagtca	cccatcaggg	cctgagctcg	cccgtcacaa	agagcttcaa	caggggagag	1380
61	tgttgaattc	agatccgtta	acggttacca	actacctaga	ctggattcgt	gacaacatgc	1440
62	ggccgtgata	tctacgtatg	atcagcctcg	actgtgcctt	ctagttgcca	gccatctgtt	1500
63	gtttgcccct	cccccgtgcc	ttccttgacc	ctggaaggtg	ccactcccac	tgtcctttcc	1560
		aggaaattgc					1620
		aggacagcaa					1680
66	gcggtgggct	ctatggaacc	agctggggct	cgacagctat	gccaagtacg	ccccctattg	1740
		cggtaaatgg					1800
		gcagtacatc					1860
69	ggcagtacat	caatgggcgt	ggatagcggt	ttgactcacg	gggatttcca	agtctccacc	1920
70	ccattgacgt	caatgggagt	ttgttttggc	accaaaatca	acgggacttt	ccaaaatgtc	1980
		cgccccattg					2040
		tgggtacgtc					2100
		gcctcatctt					2160
		cggtcttccc					2220
		gcctggtcaa					2280
76	ggcgccctga	ccagcggcgt	gcacaccttc	ccggctgtcc	tacagtcctc	aggactctac	2340
77	tccctcagca	gcgtggtgac	cgtgccctcc	agcagcttgg	gcacccagac	ctacatctgc	2400
		acaagcccag					2460
		acacatgccc					2520
80	ttcctcttcc	ccccaaaacc	caaggacacc	ctcatgatct	cccggacccc	tgaggtcaca	2580
		tggacgtgag					2640
		tgcataatgc					2700
83	cgtgtggtca	gcgtcctcac	cgtcctgcac	caggactggc	tgaatggcaa	ggactacaag	2760
84	tgcaaggtct	ccaacaaagc	cctcccagcc	cccatcgaga	aaaccatctc	caaagccaaa	2820
85	gggcagcccc	gagaaccaca	ggtgtacacc	ctgcccccat	cccgggatga	gctgaccagg	2880
86	aaccaggtca	gcctgacctg	cctggtcaaa	ggcttctatc	ccagcgacat	cgccgtggag	2940
		atgggcagcc					3000
88	gacggctcct	tcttcctcta	cagcaagctc	accgtggaca	agagcaggtg	gcagcagggg	3060
		catgctccgt					3120
90	ctctccctgt	ctccgggtaa	atgaggatcc	gttaacggtt	accaactacc	tagactggat	3180
91	tcgtgacaac	atgcggccgt	gatatctacg	tatgatcagc	ctcgactgtg	ccttctagtt	3240
		tgttgtttgc					3300
93	ccactgtcct	ttcctaataa	aatgaggaaa	ttgcatcgca	ttgtctgagt	aggtgtcatt	3360
94	ctattctggg	gggtggggtg	gggcaggaca	gcaaggggga	ggattgggaa	gacaatagca	3420
95	ggcatgctgg	ggatgcggtg	ggctctatgg	aaccagctgg	ggctcgacag	cgctggatct	3480
		agctttgctt					3540
		ccaattcagt					3600
		ctctgcacag					3660
99	gactcctaag	ccagtgagtg	gcacagcatt	ctagggagaa	atatgcttgt	catcaccgaa	3720
						gatagagagg	3780
						acatttgctt	3840
						gatttcgcgc	3900
						tgccatcatg	3960
						caagaacgga	4020

Input Set : D:\09-911703_SL7.txt

Output Set: N:\CRF4\08182005\I911703D.raw

105	gacctaccct	ggcctccgct	caggaacgag	ttcaagtact	tccaaagaat	gaccacaacc	4080
106	tcttcagtgg	aaggtaaaca	gaatctggtg	attatgggta	ggaaaacctg	gttctccatt	4140
107	cctgagaaca	atcgaccttt	aaaggacaga	attaatatag	ttctcagtag	agaactcaaa	4200
108	gaaccaccac	gaggagctca	ttttcttgcc	aaaagtttgg	atgatgcctt	aagacttatt	4260
109	gaacaaccgg	aattggcaag	taaagtagac	atggtttgga	tagtcggagg	cagttctgtt	4320
110	taccaggaag	ccatgaatca	accaggccac	cttagactct	ttgtgacaag	gatcatgcag	4380
111	gaatttgaaa	gtgacacgtt	tttcccagaa	attgatttgg	ggaaatataa	acttctccca	4440
			tgaggtccag				4500
			acaggaagat				4560
			atgggacttt				4620
115	ttctagttgc	cagccatctg	ttgtttgccc	ctccccgtg	ccttccttga	ccctggaagg	4680
			cctaataaaa				4740
			gtggggtggg				4800
			atgcggtggg				4860
			ttatttgcat				4920
			agcaaatgcg				4980
			aacattattc				5040
			tctagggaga				5100
			agggccaatc				5160
			aggtaggatc				5220
			gatcctctat				5280
			ggctattcgg				5340
			ggctgtcagc				5400
			atgaactgca				5460
			cagctgtgct				5520
			cggggcagga				5580
			atgcaatgcg				5640
			aacatcgcat				5700
			tggacgaaga				5760
			tgcccgacgg				5820
			tggaaaatgg				5880
			atcaggacat				5940
			accgcttcct				6000
			gccttcttga				6060
			gcccaacctg				6120
			cggaatcgtt				6180
			gttcttcgcc				6240
			catcacaaat				6300
			actcatcaat				6360
			taatcatggt				6420
			atacgagccg				6480
			ttaattgcgt				6540
			taatgaatcg				6600
			tcgctcactg				6660
			aaggcggtaa				6720
			aaaggccagc				6780
			ctccgcccc				6840
			acaggactat				6900
			ccgaccctgc				6960
	223	3	5 5-	555	- 5		. = =

Input Set : D:\09-911703 SL7.txt

Output Set: N:\CRF4\08182005\1911703D.raw

154	cttcgggaag	cgtggcgctt	tctcaatgct	cacgctgtag	gtatctcagt	tcggtgtagg	7020	
155	tcgttcgctc	caagctgggc	tgtgtgcacg	aaccccccgt	tcagcccgac	cgctgcgcct	7080	
156	tatccggtaa	ctatcgtctt	gagtccaacc	cggtaagaca	cgacttatcg	ccactggcag	7140	
157	cagccactgg	taacaggatt	agcagagcga	ggtatgtagg	cggtgctaca	gagttcttga	7200	
				ggacagtatt			7260	
				gctcttgatc			7320	
160	gtagcggtgg	tttttttgtt	tgcaagcagc	agattacgcg	cagaaaaaaa	ggatctcaag	7380	
161	aagatccttt	gatcttttct	acggggtctg	acgctcagtg	gaacgaaaac	tcacgttaag	7440	
162	ggattttggt	catgagatta	tcaaaaagga	tcttcaccta	gatcctttta	aattaaaaat	7500	
163	gaagttttaa	atcaatctaa	agtatatatg	agtaaacttg	gtctgacagt	taccaatgct	7560	
164	taatcagtga	ggcacctatc	tcagcgatct	gtctatttcg	ttcatccata	gttgcctgac	7620	
165	tccccgtcgt	gtagataact	acgatacggg	agggcttacc	atctggcccc	agtgctgcaa	7680	
166	tgataccgcg	agacccacgc	tcaccggctc	cagatttatc	agcaataaac	cagccagccg	7740	
167	gaagggccga	gcgcagaagt	ggtcctgcaa	ctttatccgc	ctccatccag	tctattaatt	7800	
168	gttgccggga	agctagagta	agtagttcgc	cagttaatag	tttgcgcaac	gttgttgcca	7860	
169	ttgctacagg	catcgtggtg	tcacgctcgt	cgtttggtat	ggcttcattc	agctccggtt	7920	
170	cccaacgatc	aaggcgagtt	acatgatccc	ccatgttgtg	caaaaaagcg	gttagctcct	7980	
171	teggteetee	gatcgttgtc	agaagtaagt	tggccgcagt	gttatcactc	atggttatgg	8040	
172	cagcactgca	taattctctt	actgtcatgc	catccgtaag	atgcttttct	gtgactggtg	8100	
173	agtactcaac	caagtcattc	tgagaatagt	gtatgcggcg	accgagttgc	tcttgcccgg	8160	
174	cgtcaatacg	ggataatacc	gcgccacata	gcagaacttt	aaaagtgctc	atcattggaa	8220	
175	aacgttcttc	ggggcgaaaa	ctctcaagga	tcttaccgct	gttgagatcc	agttcgatgt	8280	
176	aacccactcg	tgcacccaac	tgatcttcag	catcttttac	tttcaccagc	gtttctgggt	8340	
177	gagcaaaaac	aggaaggcaa	aatgccgcaa	aaaagggaat	aagggcgaca	cggaaatgtt	8400	
178	gaatactcat	actcttcctt	tttcaatatt	attgaagcat	ttatcagggt	tattgtctca	8460	
				aaaataaaca			8520	
	ttccccgaaa						8540	
182	<210> SEQ 1	ID NO: 2						
183	<211> LENGT	TH: 9209					•	
184	<212> TYPE:	: DNA						
185	<pre>5 <213> ORGANISM: Artificial Sequence</pre>							
187	7 <220> FEATURE:							
188	<223> OTHER INFORMATION: vector with chimeric antibody sequence							
190	<400> SEQUE	ENCE: 2						
191	gacgtcgcgg	ccgctctagg	cctccaaaaa	agcctcctca	ctacttctgg	aatagctcag	60	
192	aggccgaggc	ggcctcggcc	tctgcataaa	taaaaaaaat	tagtcagcca	tgcatggggc	120	
193	ggagaatggg	cggaactggg	cggagttagg	ggcgggatgg	gcggagttag	gggcgggact	180	
194	atggttgctg	actaattgag	atgcatgctt	tgcatacttc	tgcctgctgg	ggagcctggg	240	
				agatgcatgc			300	
				tgacacacat			360	
				ttagttcata			420	
				ggctgaccgc			480	
				acgccaatag			540	
				ttggcagtac			600	
				aaatggcccg			660	
				tacatctacg			720	
				gggcgtggat			780	
				gggagtttgt			840	
				ccattgacgc			900	
	-		_	3 3				

Input Set : D:\09-911703 SL7.txt

Output Set: N:\CRF4\08182005\I911703D.raw

206	cggtgggagg	tctatataag	cagagetggg	tacqtqaacc	gtcagatcgc	ctqqaqacqc	960
		ctctcactat					1020
		taatgtccag					1080
		gggagaaggt					1140
		agcagaagcc					1200
		gagtccctgt					1260
		gagtggaggc					1320
		cgttcggagg					1380
		tcttcccgcc					1440
		ataacttcta					1500
		gtaactccca					1560
		gcaccctgac					1620
		cccatcaggg					1680
		agatccgtta					1740
		tctacgtatg					1800
		ccccgtgcc					1860
		aggaaattgc					1920
		aggacagcaa					1980
		ctatggaacc					2040
		cggtaaatgg					2100
		gcagtacatc					2160
		caatgggcgt					2220
		caatgggagt					2280
		cgcccattg					2340
		tgggtacgtc					2400
		gcctcatctt					2460
		agcagcctgg					2520
		ctggctacac					2580
		tggaatggat					2640
		aaggcaaggc					2700
		gcctgacatc					2760
		actggtactt					2820
		agggcccatc					2880
		ccctgggctg					2940
		gcgccctgac					3000
		ccctcagcag					3060
		acgtgaatca					3120
		acaaaactca					3180
		tcctcttccc					3240
		gcgtggtggt					3300
		gcgtggaggt					3360
		gtgtggtcag		_		_	3420
		gcaaggtctc					3480
		ggcagccccg					3540
		accaggtcag					3600
		gggagagcaa					3660
		acggctcctt					3720
		acgtcttctc					3780
		tctccctgtc					3840
224	cagaagagcc	coccetyce	cccyyycada	cyayyacccy	ccaacyycta	Coudciacci	2040

VERIFICATION SUMMARY

DATE: 08/18/2005 TIME: 10:39:00

Input Set : D:\09-911703_SL7.txt

PATENT APPLICATION: US/09/911,703D

Output Set: N:\CRF4\08182005\1911703D.raw